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AUTHOR Smith, Keith E.
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ABSTRACT

Fourteen commissioned papers and studies on issues relating to career education are summarized. The purpose of these papers was to assess, monitor, and report on the condition of career education as a reform movement in the United States, and to recommend to Congress appropriate legislation for the furtherance of career education. Four papers on the efficacy of career education focused on career awareness, academic achievement, career decision-making, and other ways of assessing effectiveness. Eight papers were commissioned to help the Council identify the various Federal and state legislative authorizations for career education related activities. The topics are: "Key Concepts in Career Education: Legislative and Policy Issues," "Career Education: An Idea Whose Time Has Come," "Proposals for Career Education Legislation," "Career Education and the Future," "An Analysis of Federal Legislation Bearing on Career Education," "The Implementation and Administration of a Federal Career Education Program," "An Analysis of State Laws on Career Education and Pending State Legislation," and "Analysis and Synthesis of Existing Career Education Legislation." Additional papers are entitled: "Review and Synthesis of Research Concerning Career Education" and "The Emerging History of Career Education." (TA)

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A SUMMARY OF COMMISSIONED PAPERS PREPARED FOR THE NATIONAL ADVISORY COUNCIL FOR CAREER EDUCATION

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National Advisory Council for Career Education

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National Advisory Council for Career Education, 1976

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A SUMMARY OF COMMISSIONED PAPERS PREPARED

FOR THE NATIONAL ADVISORY COUNCIL FOR CAREER EDUCATION

by
Keith E. Smith

CE 008 292

Introduction

The National Advisory Council for Career Education was established by the Educational Amendments of 1974 (P.L. 93-380). The Council is charged by Congress with two general tasks:

1. To assess, monitor and report upon the condition of career education as a reform movement in the United States, and

2. To recommend to Congress appropriate legislation for the furtherance of career education.

During the fall of 1974 and the early spring of 1975, lists of potential Council members were reviewed and screened. The final selection and appointment of the Council members by the Secretary of Health, Education and Welfare were completed by the beginning of March, 1975. The National Advisory Council for Career Education is composed of twelve public members, appointed by the Secretary, and nine non-voting ex-officio members.

Commissioned Papers

An early task of the Council was the commissioning of fourteen papers and studies on a number of important issues relating to career education. Through these papers the Council sought to gather information which would increase the effectiveness of the Council's own activities, to close the knowledge gaps for the Office of Career Education staff, and for possible public dissemination. The following papers were commissioned:

1. "The Efficacy of Career Education, Career Awareness," Dr. Elvis H. Arterbury.

2. "The Efficacy of Career Education, Academic Achievement," Ms. Rita Bryant.

3. "The Efficacy of Career Education, Career Decision-Making," Dr. Michael J. Masucci.

4. "The Efficacy of Career Education, Other Ways of Assessing Effectiveness," Ms. Cherylynn Schager

5. " The Emerging History of Career Education: A Summary View," Dr. Edwin L. Herr

6. " An Analysis of State Laws on Career Education and Pending State Legislation," Dr. David Jesser

7. " Doctoral Research Studies Related to Career Education," Dr. Robert Worthington

8. " An Analysis of Federal Legislation Bearing on Career Education," Dr. Melvin L. Barlow

9. " Key Concepts to be Addressed by NACCE," Dr. Joel S. Berke

10. " Analysis and Synthesis of Existing Career Education Legislation," Dr. Joel S. Berke and Mr. Terry W. Hartle

11. " The Implementation and Administration of a Federal Career Education Program," Mr. Terry W. Hartle

12. " Proposals for Career Education Legislation," Dr. Melvin Barlow

13. " Career Education and the Future," Mr. Raymond Wasdyke

14. " Career Education: An Idea Whose Time Has Come," Mr. Terry W. Hartle and Dr. Joel S. Berke

The following report summarizes the commissioned papers prepared for the National Advisory Council for Career Education.

Career Education - An Idea Whose Time Has Come

Over the last few years American educators have faced increasing public demands to make education relevant to the world of work. The facts support that challenge. Students

need career education: millions leave high school and college each year with no saleable skills. The public supports it: a recent Gallup poll found 90% in favor of giving more emphasis to help students make informed career choices. Federal legislation has encouraged greater attention to this need: over forty million dollars in federal aid is devoted annually to developing career education programs. States have reacted with enthusiasm: twenty-five state legislatures have appropriated funds specifically earmarked for career education. Career education is working: while the concept is new, some data and student and teacher response demonstrate that attitudes toward work are more positive and students are learning more.

Career education seeks to be one answer to the criticisms currently leveled against American education for failing to prepare students for the world of work. Among these criticisms:

1. Too many persons leaving our educational system are deficient in the basic academic skills required for adaptability in today's rapidly changing society.

2. Too many students fail to see meaningful relationships between what they are being asked to learn in school and what they will do when they leave the educational system. This is true of both those who remain to graduate and those who drop out of the educational system.

3. American education, as currently structured, best meets the educational needs of that minority of persons who will someday become college graduates. It fails to place equal emphasis on meeting the educational needs of that vast majority of students who will never be college graduates.

4. American education has not kept pace with the rapidity of change in the postindustrial occupational society. As a result, when worker qualifications are compared with job requirements, we find overeducated and undereducated workers are present in large numbers. Both the boredom of the overeducated worker and the frustration of the undereducated worker have contributed to growing worker alienation in the total occupational

society.

5. Too many persons leave our educational system at both the secondary and collegiate levels unequipped with the vocational skills, the self-understanding and career decision-making skills, or the work attitudes that are essential for making a successful transition from school to work.

6. The growing need for and presence of women in the work force has not been reflected adequately in either the educational or the career options typically pictured for girls enrolled in our educational system.

7. The growing needs for continuing and recurrent education of adults are not being met adequately by our current systems of public education.

8. Insufficient attention has been given to learning opportunities which exist outside the structure of formal education and are increasingly needed by both youth and adults in our society.

9. The general public, including parents and the business-industry-labor community, has not been given an adequate role in formulation of educational policy.

10. American education, as currently structured, does not adequately meet the needs of minority or economically disadvantaged persons in our society.

11. Post high school education has given insufficient emphasis to educational programs at the sub-baccalaureate degree level.

Each of these criticisms centers on the relationship between education and future employment opportunities of individuals. Programs designed to meet these criticisms must find a common ground of agreement between the worlds of education and work. One approach is career education. Although the term is of recent vintage, career education has had a considerable impact on American education.

What is career education? The Office of Education

Policy Statement on Career Education defined the term generically:

> "career education is the totality of experiences through which one learns about and prepares to engage in work as part of her or his way of living."

In 1974 the U.S. Congress used a similarly broad approach in defining the term as an education process designed:

> to increase the relationship between schools and society as a whole
>
> to relate the subject matter to the curricula of schools to the needs of persons to function in society
>
> to provide opportunities for counseling, guidance and career development for all children
>
> to extend the concept of the education process beyond the school into the area of employment and the community
>
> to foster flexibility in attitudes, skills, and knowledge in order to enable persons to cope with accelerating change and obsolescence
>
> to make education more relevant to employment and functioning in society
>
> to eliminate any distinction between education for vocational purposes and general or academic education

Career education is a response to a genuine need. Consequently the career education concept has met with wide acceptance throughout the nation. Numerous efforts are being developed to foster a closer education/work relationship. Some of these representative activities are described below:

> In South Bend, Indiana, a conference phone was installed in a special room of the junior/senior high school. The phone was used to call community resource people and discuss career-related ideas with students in their own classroom. The local service clubs developed a volunteer People-In-Careers directory and the local Chamber of Commerce

funded telephone installation and monthly rental.

A ninth grade course in social economics, in Riverton, Wyoming, involves students in setting up a company, deciding on a product and marketing the product, and using advertising and sales techniques.

Twelfth grade students in English in Lufkin, Texas, study the life of a member of the student's family, ideally a grandparent or someone of that age. Students not only learn note-taking, recording, interviewing skills, and story-telling, but they learn about the world of work and human values, the job changes their family member has made and the choices that had to be made to establish their life's work and life-style.

In Raleigh, North Carolina, vestibule training for students in grades 11-12 matched student interests in developing skills with industries within the community area who indicated their areas of need. Specialist personnel, including school staff, taught the special courses at night (three nights a week for 3 hrs, for courses lasting between six and eight weeks). Many industries hired students after this training, and in some instances, did the training themselves.

In Los Angeles, the Los Angeles County Alliance for Career Education and Industry Education Councils represent more than 100 separate groups in business, industry, government and labor unions. The Alliance sponsors work experience, observation, and work-study activities for students, as well as a Career Expo, which provided career awareness information to 198,000 students in 1975. The Personnel Exchange Program allows teachers and counselors themselves to explore work environments, gaining their own hands-on experience of different work than teaching.

At the Winston Churchill High School in Potomac, Maryland, 87% of the graduating students begin college. Accordingly, the career education program focuses on managerial and professional lines of work. Some 150 seniors spend from 10-20 hours a week in the offices of professional/technical/ managerial employers in both private industry

and government.

In Cleveland, Ohio where an increasing proportion of students in five central schools were dropping out, eventually to continue the welfare cycle, a Job Development Program for non-college bound seniors offering a job preparation course, field trips and spring interviews with employers organized by the schools has succeeded in placing 90% of the participating students between June 1966 and June 1974, many of whom have used their earnings to continue their education part-time.

In New Jersey, the Task Force on the Education of Women of the National Organization of Women compiled a roster of 200 New Jersey women employed in non-sterotypic careers...These women agreed in serve as resource persons for classroom visits and for special career days.

These activities are representative of what is happening in thousands of locations across our nation. Truly, career education is idea whose time has come.

THE EFFICACY OF CAREER EDUCATION

In its search for data reflecting the efficacy of career education the National Advisory Council on Career Education commissioned four of fourteen papers. These papers focused on career awareness, academic achievement, career decision making and other ways of assessing effectiveness. Brief summaries of the four papers follow.

THE EFFICACY OF CAREER EDUCATION, CAREER AWARENESS

The purpose of this paper was to review existing evaluative studies that are indicative of the efficacy of the career awareness element of career education. The studies discussed represent a sampling of the degree of success achieved by educators in implementing and evaluating career education across the nation.

The information revealed that there is general agreement with regard to definitions of what career

education means. However, conceptualizations of career awareness and other elements of career education are more diverse. As more specific objectives, program implementation and evaluation are addressed, less agreement and greater disparities appeared.

Most practitioners include varying aspects of psychological and economic theoretical domains in their conceptualizations of career awareness. The sociological domain is much less prominent among the studies reviewed.

It is evident that program development and implementation are well in advance of evaluation and assessment. There is a tendency to assign a low priority to evaluation and problems exist with evaluation design and measurement instruments. Several factors contribute to these difficulties. Teachers do not recognize the potential value of evaluative studies. There is considerable lack of specificity among objectives which have been identified under the career awareness concept. Measurement methodologies are varied and few standardized instruments are available. Measures for objectives in the affective domain tend to be unavailable and measures to determine the impact of one variable on another appear to be equally scarce. There is an unequal handling of the measurement of career awareness.

Although not exhaustive, the studies referenced in this paper are descriptive of the extent to which the concept of career education and, more specifically, career awareness programs are producing quantative data for evaluation purposes. Subjective evaluations of programs tend to be positive and the participants were favorably optimistic about the total effort. Analysis of the information accumulated reveals that adequate evidence is available to support the position that education programs designed to develop career awareness in students can make a difference. Based on the studies presented it can be concluded that regardless of the variety of definitions, the variety of implementation methods and the variety of evaluative techniques, career education is making statistically significant changes in student development.

CHART I

STUDIES REVIEWED BY TUCKMAN AND CARDUCCI RELEVANT TO CAREER AWARENESS AND SELF AWARENESS

Author and Site of Study	Grade Level	Instrument	Analysis	Findings
Cochran and Weis (1972) Dayton, Ohio	9-10	Ohio Vocational Interest Survey	Analysis of covariance	"...student from the vocational school were better informed about career choice..."
Holstein (1972) Lincoln Co., West Virginia	1-6	Homemade test of occupational awareness	Analysis of covariance	"...career education students outperformed control students on all measures."
Ovard (1973) Utah	6	Not specified	Chi square	"...students showed favorable change in attitude toward work..."
Sims (1973) Cleveland, Ohio	5-6	Job information questionnaire	Analysis of variance	"...treatment school students had acquired more job information than the control."
McNulty (1974) Massachusetts	11-12	Career Maturity Inventory	Analysis of covariance	"...positive correlation between scores for all students..."
Warren (1974) Kansas	6-8	Career Maturity Inventory	t-test	"...significant differences in mean scores in favor of treatment group."
Bariolo (1972) Alameda Co., Calif.	Elem.	Occupational Information Survey	t-test	"...yielded greater gains for treatment students than for controls at elementary level."

Cunningham (1973) New Britian, Conn.	Elem.	How I See Myself Scales	t-test	"...showed significant differences between the control and experimental groups."
Dennard (1973) Calyton Co., Geo.	4	Student Knowledge of Careers	not specified	"...fourth graders in programs had greater knowledge of career than those not in program."
Holden (1973) South Carolina	Elem.	A battery of cognitive and affective instruments	not specified	"Kershaw and Chesterfield counties were fairly successful in efforts to teach elementary school students about careers."
Peck (1973) District of Columbia	K-9	Self Observation Scale	not specified	"...showed CDEP children to have better self-concept than controls."
"	"	Work Attitude Survey	not specified	"...revealed CDEP students had more positive attitudes toward work than controls."
"	7-9	Occupational Values Inventory	not specified	"...students were realistic in their career planning."
"	6-9	Career Awareness Development Inventory	not specified	"...students were able to relate school-learned skills to work situations at reasonable level of proficiency."

Young (1971) New Orleans	1-8	Attitude Toward Work Inventory	t-test	"A significant positive gain was found for students in grades 1-8."
Harmond (1973)	7	Occupational Knowledge Test	t-test	"...significant gain in mean scores of seventh grade students."

THE EFFICACY OF CAREER EDUCATION,
ACADEMIC ACHIEVEMENT

This paper reviewed the assessment of many programs including information concerning the improved self concept or self esteem of students. The final report of the research and development career education project in Raleigh, West Virginia (1974) cited relationships among self concept, ability and achievement. Results of the study showed that for seventy-two students at the third-grade level, self concept (as measured by the Self Observation Scales) accounted for 13.5% of the variance in predicting ability and 21.2% of the variance in predicting achievement (as measured by the Education Development Series test battery). These findings were consistent with the research data of IBEX, Inc., which indicates that self concept is a major contributor to achievement and is a construct distinct from ability (Klaus, 1974).

Seventy-seven percent (77%) of the teachers in the Sacramento Unified School District indicated that career education greatly increased pupil motivation for class work. Sixty-three percent (63%) said that pupils were more interested in school projects as a result of career education. Similar support was given by teachers in Richmond, California, as well as in many other locations.

If students have good feelings about themselves and positive relationships with others, school achievement may increase. Hoyt (1975) points out that positive relationships have been established between productivity and reduction of worker alienation. He maintains that educational productivity--increases in academic achievement--should result if worker alienation is reduced among students and teachers. Many of the techniques and strategies of implementing career education programs are aimed at reducing worker alienation among students and teachers.

Evaluations of a number of school-based career education programs reflect satisfaction of students, parents, educators, and other community members with the goals, activities and results of the implemented programs. Continued support of the exemplary projects, expansion of pilot-school programs to encompass entire school systems or countrywide units, and records of community involvement are described in reports. These

"soft data" and numerous other supporting materials appear to reflect the information needs of many educators at the local level. Reading the wording of program goals and objectives, one might infer that local planners concurred on a basic assumption that academic achievement would not be impeded by making the curriculum more relevant to the world of work and emphasizing the career development and guidance of children and youth.

Although this paper does not represent an exhaustive review of evaluations conducted, it does, to the greatest extent possible, contain reviews of studies currently available. Indications are that the evaluations of many 1975-1976 programs may contribute substantially to the knowledge now available concerning the interrelationship of career education and academic achievement. Soft data have indicated that positive changes in the self concepts and work habits of some students have taken place. Follow-up studies, indeed, may net more hard data that career education can aid the development of students' acquisition of the fundamental skills--reading, writing, and arithmetic.

THE EFFICACY OF CAREER EDUCATION, CAREER DECISION-MAKING

The purpose of the paper was to examine and report attempts to evaluate pupil behavior sought by career education efforts in career decision making. In so far as was possible, the paper concentrated attention on programs designed to operate at the secondary school level.

Most of the program materials reviewed for this study indicate a relatively informal approach to career education implementation as well as a relatively informal approach to evaluation of the programs. With this fact in mind, one can cautiously interpret the findings of the few studies cited, to indicate that it is <u>possible</u> to plan career education programs which include career decision-making objectives and to evaluate these in a relatively formal manner. Obviously, the great majority of programs (although most recognized the importance of career decision-making) elected to direct primary focus on awareness, achievement or other career education goals. Another important point to consider is the lack of longitudinal data to examine the nature of an evolving process of career decision-making which must be under-taken if a better understanding of decision-making is to occur.

Since the title of the paper include the word "efficacy" which means either the power to produce effect or the production of intended effects, one can generalize that career education programs have the potential power to produce career decision-making effects which are specific and desirable. It is also obvious that wide scale attempts at producing specific career decision-making "effects" has either not occured and/or has not been reported extensively. Examination of all the material (including that which was not included in the paper) indicate that much activity in career decision-making is included in the programs. What seems to be lacking is a sound theoretical-research base for prescribing and reporting these events.

THE EFFICACY OF CAREER EDUCATION: OTHER WAYS OF ASSESSING EFFECTIVENESS

The major purpose of this part of the report was to determine the efficacy of career education programs in areas other than academic achievement, career awareness and career decision-making. Forty-one (41) career education projects responded to a survey designed to identify the effects on students of these other career education components, particularly career exploration, occupational preparation and job placement. About three-fourths of the responding projects were supported by Vocational Education Act funds (Parts C and D) while the remainder were funded at the state and/or local levels.

The student outcomes measured by the responding projects were loosely categorized into these areas: (1) Self-awareness, (2) career exploration, (3) occupational preparation and job placement and (4) general attitudes toward career education. From the data reported by the surveyed projects the following tentative conclusions can be drawn about the efficacy of career education in these four areas:

1. Participation in career education activities appears to have a positive influence on students' self-concept and general self-awareness, particularly in the primary grades. The amount of influence reported is extremely variable, however, ranging from no significant differences

between participating students and control groups in a few projects to statistically significant increases in self-concept in other projects. Virtually no projects are able to relate outcomes in this area to specific program activities, so there is no way of establishing the relative effectiveness of different kinds of career education activities designed to increase student self-awareness.

2. Elementary and junior high school students involved in what projects term career motivation, career orientation and/or career exploration activities seem to respond differently. Elementary students seem less likely to acquire positive attitudes toward work and seem less capable of relating their interests and abilities to occupational options in making realistic tentative career choices. Most students like the activities in which they participate and develop more divergent career interests as the result of their participation.

3. Virtually no effort is being made to measure the effectiveness of occupational preparation and job placement programs. None of the projects surveyed had written objectives describing the intended outcomes of such activities in terms of the occupational skills students should possess upon leaving school or the proportion of successful job placements expected.

4. Students in grades K-12 generally respond positively to participation in career education programs. Their attitudes toward career education and toward school in general appear to improve with increased exposure to career education programs and services.

The conclusions stated here are very tentative and should not be used in determining career education policies unless they are heavily supplemented by other kinds of information. Some of the reasons for urging such caution are listed below.

1. True experimental evaluation designs are seldom used in measuring program impact on students.

When comparison groups are used, no apparent attempts to prevent contamination are made.

2. The objectives of the different career education components are ambiguous and often imprecise. What one "career exploration evaluation instrument" measures, for example, may be entirely different from what another instrument of the same title measures. Consistent results from a number of "career exploration evaluation instruments" could be very misleading.

3. The specific treatments comprising career orientation, career motivation, career exploration or any other program component are extremely variable and virtually no projects attempt to systematically identify what particular activity (or series of activities) is associated with what particular student outcome. Without this kind of information, evaluation findings have little value to someone who wants to design and implement a potentially successful career education program.

These findings are congruent with the findings and general conclusions of another, more rigorous study of the results of the first three years' efforts to implement programs under Part D of the Vocational Educational Act. Under contract with the USOE Division of Vocational and Technical Education, Development Associates of Washington, D.C., concluded in their March, 1975, report:

> Projects were typically not well defined in terms of purpose or clientele and this lack of clarity may relate to the failure in many projects to identify student outcomes significantly related to project activities (p. 3).
>
> A review of the stated objectives of the 50 projects reveal that in many cases the activities called for by the policy paper were not addressed. In addition, a comparison between stated objectives of projects and activity categories indicated that in many projects the performance of activities could not be related to the stated objectives (p. 4).
>
> The definition of key terms and concepts was neither precise nor consistent at either the federal or local levels...This failure to establish operational defin-

itions and categories contributed to the inability of projects to identify with assurance participants in the programs and to the inability at the federal level to monitor project efforts effectively. (Development Associates, Inc. 1975, p.6)

In the course of examining the career education projects in the study sample for evidence of success in achieving desired student outcomes, it becomes apparent that an entirely different approach to evaluating project success is being used. This alternative to standard project evaluation is a kind of process evaluation designed to demonstrate career education's effectiveness as an educational reform movement. The relatively heavy emphasis on the processes and activities of career education in the USOE policy paper, An Introduction to Career Education, is proposed as one of the possible reasons for a penchant for counting the career education materials developed, disseminated and used, for counting the number of teachers and counselors who participate in in-service activities and for surveying parents and potential employers for their attitudes about career education concepts.

Other possible reasons for the heavier emphasis on process measures are the lack of clarity and consistency in career education goals and objectives and the lack of valid and reliable instruments for measuring program impact. Whatever the reason for career educators' concern for processes and their apparent lack of systematic attention to student outcomes, the evidence of success career education projects are able to produce is more clearly related to the presumed need for educational reform than it is to career education's success as an instructional innovation.

In summary, the career educator is finding it both desirable and expedient to focus evaluation efforts on gauging levels of support and acceptance for career education programs rather than on measuring such programs' short - and long-term influences on students' ability to link education and work in shaping their careers. Dr. Kenneth B. Hoyt, Director of the U.S. Office of Career Education, very accurately described the status of current

career education evaluation efforts in his address to the March, 1975, USOE Career Education and Teacher Education Conference:

> It seems safe to say that the quantity of effort expended at the local school district level has exceeded the quality of that level by a very wide margin. Evaluation efforts, while generally yielding positive results, are found only infrequently and, by and large, are lacking in convincing quality. This lack of sound evidence of effectiveness has not seemed to dampen local enthusiasm for career education. It seems appropriate to say that, by and large, career education has been accepted on faith---and that an abundant amount of faith exists. (p. 4)

Table 2. Career Exploration Outcomes

OUTCOME	PROJ LOCAT*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Positive attitude toward work	Ohio (1)	5,7,9	Criles' Career Attitude Scale given to project students and a comparison group	No significant change in either group's scores in comparison with national norms	(Not specified)
Awareness of the personal and social significance of work	Ohio (7)	K-6	No instrument used; observation only	Increased student awareness at project schools' Career Education Day programs	(Not specified)
Positive attitudes toward careers and the career choice process	New Jersey (5)	Not Spec.	Junior Inventory of Motivation given to project students and a control group	Results positive in favor of project students but not at the 5% level	(Not specified)
	Ohio (7)	1-3, 4-6	Locally developed test given to project students and a control group	6.3% more project students than control group students knew the necessity and importance of a wide range of work; 14% more than at intermediate level	(Not specified)
	Missouri	K-3	Student Attitude Survey given pre and post	No significant change in Attitudes Toward Work Scores	(Not specified)

*See list of respondents in appendix for names of projects and cities in which they are located

Table 2. Career Exploration Outcomes

OUTCOME	PROJ. LOCAT*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Awareness of the relationship of school to work	New York (2)	Not Spec.	"Understanding Myself" Survey for students, Classroom Teacher Observation Form for teachers and "Assessing my Child in School" Survey for parents given pre and post to project participants and a control group	6.5% more project students aware of school-work relationships; 10.8% more project parents reported increased student awareness of school-work relationships	(Not specified)
	Ohio (4)	8	Career Test, Relationship of A Life Related Learning Activity to the Working World, given to project students at end of year	40-57% of students performed above "the established norm" in the Test's three exercises	(Not specified)
	Calif. (4)	7-12	Survey completed by project students at beginning and end of project's three years	Little change in the high percentage (82.4%) of students who said that career education could help them understand certain other subjects or in the percentage (86%) who said school could help them prepare for work	(Not specified)
	Ohio (7)	4-6, 7-8	Student survey administered to project students and a comparison group at the end of the year	21% more intermediate and 8.1% more junior high students in project felt school was helping them prepare for work than in comparison group	(Not specified)

*See list of respondents in appendix for names of projects and cities in which they are located.

Table 2. Career Exploration Outcomes

OUTCOME	PROJ. LOCAT*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Awareness of the relationship of school to work	North Carolina	7	Career Based Curriculum Goals Test given to project students and a control group	No significant difference in students' reasons and their perceptions of adult reasons for going to school	(Not specified)
Ability to make and justify tentative occupational choices	Ohio (7)	4-6, 7-8	Student survey administered to project students and a comparison group at the end of the year	No difference between project and comparison students in grades 4-6; a 34% difference in favor of project students in grades 7-8	(Not specified)
	North Carolina	7	"Career planning knowledge" section of Career Development Test given to project and control groups	Project students scored significantly higher	(Not specified)
	New Jersey (5)	Not Spec.	Career Maturity Inventory, Part 3, given to project and control groups	Results positive in favor of project students, some significant at 1% level	(Not specified)
	Arizona (1)	7-8	Survey of Occupational Cluster Interest given at end of year	85% completed instrument satisfactorily	(Not specified)
Interest in a wide variety of job clusters	Arizona (1)	6-8	Project designed interest surveys at end of year	Interest expressed in all 15 job clusters, ranging from 2% to 21% in each cluster, indicating students are making independent decisions	(Not specified)

*See list of respondents in appendix for names of projects and cities in which they are located.

Table 2. Career Exploration Outcomes

OUTCOME	PROJ. LOCAT*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Knowledge of good work habits	New Jersey (2)	Not spec.	Teacher made tests given to project students at end of year	85% of students gave desired responses	(Not specified)
	North Carolina	7	Career Based Curriculum Goals Test given to project and comparison groups at end of year	A significant difference in favor of the control group	(Not specified)
Knowledge of continuing education requirements and opportunities	New Jersey (2)	Not spec.	Project developed questionnaire developed by guidance department	90% gave desired response to the questionaire	(Not specified)
	New Jersey (5)	Not spec.	Career Maturity Inventory, Part 4, given to project and comparison groups	Results positive in favor of project students, some significant at the 10% level.	(Not specified)
	Arizona (2)	4-12	Careers Test given to high exposure and low exposure students	High exposure students' knowledge significantly higher at the .001 level	(Not specified)

*See list of respondents in appendix for names of projects and cities in which they are located.

Table 2. Career Exploration Outcomes

OUTCOME	PROJ. LOCAT*	GRADE LEVEL	DESIGN AND INSTRUMENTATION	RESULTS	ASSOCIATED ACTIVITIES
Awareness of relationship between personal interests and abilities and work roles	North Carolina	3,6	Career Based Curriculum Goals Test, given to project and a control group	No significant differences between the two groups	(Not specified)
General reaction to career exploration activities	Colorado	7	Locally prepared questionnaire completed by participating students on a voluntary basis	60.7% liked the variety of classes offered in the exploration program, boys' and girls' interests markedly different	(Not specified)
	Ohio (7)	7-8	Student survey at end of year to project students and a comparison group	92% of project students feel a specific effort is being made to help them in career planning; 72% of comparison group expressed this feeling	(Not specified)
	Pennsylvania (1)	6,7,8	Student attitude survey at end of year	Mean ratings of the career orientation program were positive at all levels.	(Not specified)

*See list of respondents in appendix for names of projects and cities in which they are located.

LEGISLATION

The National Advisory Council has the responsibility to recommend appropriate legislation to the Congress to further career education. Consequently, several papers were commissioned to help the Council identify the various federal and state legislative authorizations for career education related activities.

There is considerable programmatic and definitional overlap among the activities generated from these legislative authorities. Much of the overlap stems from a Congressional concern that education (or training) be related to future employment opportunities. This interest was expressed in both the Education Amendments of 1972 and the Amendments of 1974, and can be seen in Vocational Education legislation. Programs in Social Security, Health, and especially in the Manpower Administration also seek to relate education and training programs to future employment opportunities.

Since 1971 the Office of Education has used existing legislative authorizations to fund career education programs and projects. The major pieces of legislation include titles under:

1. The Vocational Education Act of 1963, as amended
2. The Education Professions Development Act
3. The Higher Education Act of 1965
4. Education of the Handicapped Act of 1970
5. The Elementary and Secondary Education Act of 1965
6. Title III of the Education Amendments of 1972 which created the National Institute of Education and authorized career education as a responsibility of NIE

7. The Education Amendments of 1974, Section 406 which established in the Office of Education, the Office of Career Education with the authority to demonstrate the concept of career education.

Comprehensive federal education legislation which has furthered the goals and objectives of career education are: Part B, Title X of the Education Amendments of 1972 (P.L. 92-318), Occupational Education Programs (unfortunately never funded); and the Special Projects Act of the Education Amendments of 1974 (P.L. 93-380), cited in No. 7 above, with authorized funding at up to 15 million.

Federal money and public interest in career education have generated substantial activity by State governments. Yet, much remains to be done. For example, while 55 of the 57 states and territories have appointed career education coordinators, only 27 states use state funds to pay salaries of these coordinators. While state efforts have reached 2.5 million elementary pupils, 15.5 million elementary pupils have yet to be exposed to career education. Finally, while 44,520 secondary teachers have received in-service development in career education, this represents only 8.4% of the 525,574 employed in 1974.

There has been, however, considerable interest in the development of career education legislation at the state level. State legislation relating to Career Education exists in fourteen of the states at the present time. Legislation is either pending or in some state of discussion in seven states. The number of states actually possessing legislation for Career Education represents 28% of the fifty states or slightly more than one fourth. (When a total of 57 jurisdictions is used as a base, the percentage drops to 24, or slightly less than one-fourth.)

It has been suggested that the percentage figures used here might be taken as an indication of both lethargic movement and a lack of interest. Neither inference should be drawn. The growth

in the number of states having Career Education is rather startling when a time frame of seven years is applied. And it does appear likely that several states which do not have legislation of this nature at present are seriously considering it. So, it should be fair to observe that the progress has been, and is, somewhat other than lethargic. There is and has been marked movement.

STATUS OF STATE LEGISLATION FOR CAREER EDUCATION

State	Legislation Enacted	Legislation Pending	Legislation Being Discussed	Legislation Introduced but not Enacted	No Legislation
Alabama			X		
Alaska					X
Arizona	X-1971				
Arkansas	X-1975				
California					X
Colorado	X-1975				
Connecticut			X		
Delaware					X
Florida	X-1974				
Georgia					X
Hawaii	X-1974 (Resolution)				
Idaho				X	
Illinois					X
Indiana					X
Iowa	X-1975				
Kansas	X-1974 (Resolution)				
Kentucky			X		
Louisiana	X-1973				
Maine					X
Maryland			X		
Massachusetts					X
Michigan	X-1974				
Minnesota					X
Mississippi					X
Missouri					X
Montana					X
Nebraska					X
Nevada					X
New Hampshire					X
New Jersey	X-1970				
New Mexico					X
New York					X
North Carolina					X
North Dakota					X
Ohio	X-1975*				
Oklahoma					X
Oregon				X	
Pennsylvania		X			
Rhode Island			X		
South Carolina					X

STATUS OF STATE LEGISLATION FOR CAREER EDUCATION

State	Legislation Enacted	Legislation Pending	Legislation Being Discussed	Legislation Introduced but not Enacted	No Legislation
South Dakota					X
Tennessee					X
Texas					X
Utah			X		
Vermont	X-1975*				
Virginia	X-1974*				
Washington	X-1975*				
West Virginia					X
Wisconsin					X
Wyoming					X

*Contained in Appropriations Bills

STATUS OF PENDING OR PROPOSED STATE LEGISLATION FOR CAREER EDUCATION

STATE	STATUS
Alabama	No legislation prepared or drafted. Intradepartmental groups are currently meeting to discuss and make recommendations for legislation.
Connecticut	No legislation prepared or drafted. Commissioner of Education has requested recommendations for legislation from departmental staff members.
Kentucky	No legislation prepared or drafted. Recommendations for possible legislation are currently being developed.
Maryland	No legislation prepared or drafted. State Task Force for Career Education has been requested to develop recommendations.
Pennsylvania	H.B. 354 was introduced during the 1975 session of the General Assembly of Pennsylvania and referred to the Committee on Education on February 11, 1975. The Bill did not come out of the Committee, but is still pending.
Rhode Island	No legislation prepared or drafted. With creation of new staff position for Career Education, it is probable that recommendations will be forthcoming.
Utah	No legislation prepared or drafted. Intradepartmental Task Force on Career Education meet bi-monthly, and been requested to develop recommendations for Career Education legislation.

In the course of its deliberations, the National Advisory Council on Career Education considered various options for initiating legislation for extending federal leadership of career education. Among the gereral alternatives, each with subordinating variations were the following:

1. To recommend a technical revision and consolidation of existing laws pertaining to the concept of career education now found in numerous departments and agencies (Manpower, Labor, Health, Agriculture, for example, as well as the Office of Education).

2. To recommend large, new comprehensive law of substantial scale for the implementation of career education at all levels, Kindergarden through the college years to adult education.

3. To delimit the recommendation at this time to incremental moves designed to facilitate the development of staff and to formulate new relationships with the community, industry, labor and business.

The Council settled upon alternative three (3) above. This alternative sustains and enhances the role and authority of the Commissioner of Education as the resource for sharing research, encouraging staff development, increasing the awareness of the career education potential, and stimulating major new commitments by state and local authorities. In short, the proposal underscores the federal role as essentially one of <u>leadership</u>, with modest incentive funds for beginning a reform of the system.

The Council recommended legislation based on the modified suggestions of several papers. Among the key components of the legislative recommendations were the following:

1. <u>State Plans for Career Education</u>

   State plans are to be prepared by each state, according to guidelines issued by the U.S. Commissioner of Education. Each state receiving federal funds for career education must have its plan approved by the Commissioner of Education,

assisted by the Director, Office of Career Education prior to receipt of such funds.

2. Statewide Coordinator for Career Education

Each state shall employ a person at the state level who will act as a statewide coordinator for career education whose primary responsibility will be directed toward implementation of career education concepts in the local school districts of the state.

The state coordinator shall: (1) plan the in-service development programs for teachers and other instructional personnel; (2) plan the in-service development programs for counselors; (3) plan for the review of programs of career education designed for school board members and school administrators; (4) coordinate the planning for funding of local school districts; (5) arrange for evaluative reports of the progress of the statewide activities under this Act; (6) develop the criteria for funding school districts that qualify for instructional material funding and plan for the distribution of such funding; (7) prepare criteria for contracts with institutions to carry out plans for items (1), (2), (3), if the state elects to contract these responsibilities; (8) plan for and conduct, as needed, statewide conferences on career education involving both education and general community personnel.

3. Statewide Evaluation of Career Education

Each state must prepare an annual evaluation report on career education for the state showing progress in implementation of career education. The report must include evidence of an accountability nature.

4. Career Education Review for School Board Members, School Administrators, and Community Leaders

Implementation of career education depends greatly upon the actions of policy-making groups, and the community at large. This section provides for a comprehensive attempt

in each State to involve school board members, school administrators, and an equal number of community leaders (business, industry, labor, and at large) in special sessions in which concepts, principles, and practices of career education are reviewed. It is proposed that special meetings be held for such groups throughout a State in order to present the basic elements of career education for discussion and to develop an understanding of career education as part of the entire educational process.

5. Inservice Development of Teachers, and Other Instructional Personnel

In order that career education make its full impact it is imperative that teachers and other instructional personnel become acquainted with the purposes, principles, conditions, practices, techniques, materials of career education, and that they have some practice in adaptation of such information to their local conditions.

6. Inservice Development of Counselors for Career Education

Guidance and counseling personnel employed in the public elementary, secondary, and post-secondary schools should play a central role in career education. More than 50,000 such persons are employed in the United States and they are all professionally prepared for the positions they hold.

Because career education is a comparatively new concept in the educational enterprise few of these counselors will have had any professional training in the area of career education. In order to maximize the contribution of guidance and counseling personnel it is imperative to prepare a professional review program in career education in which such personnel can particpate.

7. Appointment of Local Career Education Coordinators

The effective implementation of career education, as a collaborative effort involving a wide variety of education and community personnel, demands the presence of local or district career education coordinators. The local career education coordinators perform three essential functions: (1) Serves as a link among educational and community personnel in ways that ensure effective working relationships; (2) Serves to encourage the continuing involvement in and enthusiasm for career education throughout the community; and (3) Serves as a source of technical assistance to persons involved in career education.

8. Preparation of Career Education Coordinators

This section provides funding to a state for use by institutions with career education programs to provide summer and throughout the year upgrading activities for employed career education coordinators. This is an "outreach" programs for employed career education coordinators, not a preservice program.

9. Purchase of Instructional Materials and Supplies for Local School Career Education Activities

This section provides for the allocation of funds to school districts that have appointed career education coordinators, and who need additional materials for their education resource center.

Key Concepts in Career Education

Legislative and Policy Issues

Joel Berke - Terry Hartle

This paper identified the major legislative authorization for career education and attempted to raise significant policy issues related to career education. Among the policy issues are the following:

(1) Do the existence of career education concepts in a variety of legislative sources dilute their potential impact? Or does the varied legislative authorization increase the strength of career education by creating widespread sources of support?

(2) What effect, if any, does this legislative fragmentation have on federal and state administrative effectiveness?

(3) At this stage in the development of career education, is a more specific legislative definition possible or desirable?

(4) The Amendments of 1974 encourage "eliminating any distinction between education for vocational purposes and general or academic education." How can federal legislation more effectively encourage this objective in state and local education agencies and in educational institutions?

(5) Career awareness, career orientation, job preparation, guidance, counseling, and job placement are recurring themes in the legislation. How can these activities be made effective components of a comprehensive career guidance system?

(6) How can legislation encourage better articulation among elementary, secondary, and postsecondary career education programs? How can coordination and cooperation --rather than competition -- be encouraged among secondary, community college, proprietary, and four year postsecondary career education programs?

(7) Traditional higher education is typically more diverse and individualistic than other educational

institutions. How can career education be most effectively implemented in the face of this diversity and resistance to change?

(8) Is the current federal funding level adequate at this stage in the development of career education?

Career Education : An Idea Whose Time Has Come
Terry Hartll
Joel S. Berke

This paper is developed in several sections the title of which suggest the nature of each.

(1) Conditions calling for education reform

(2) Definitions of Career Education - USOE and Congressional

(3) Public Attitudes Toward Career Education (90% of response in Gallup Poll showed was in favor of a closer education/work relationship.)

(4) Existing Career Education Legislation
   (A) Vocational Education Act 1963, amended
   (B) Education Professions Developedment Act
   (C) Higher Education Act, 1965
   (D) Education of Handicapped Act, 1970
   (E) Elementary and Secondary Education Act, 1965

(5) Activities of States and Career Education

(6) Some Exemplary Career Education Activities

(7) Suggestions for Career Education Legislation

Proposals for Career Education Legislation
Melvin L. Barlow

The Barlow paper reflects on the need for immediate implementation of career education and proposes a five year funding program to accomplish nine major goals. These goals are:

(1) state plans for career education

(2) statwide coordination of career education

(3) Inservice training of teaching for career education

(4) inservice training of counselors for career education

(5) career education review for school board members and administrators

(6) career education coordinator for local school districts

(7) training of career education coordinators

(8) statwide evaluation of career education

(9) purchase of instructional materials and supplies for local career education activities

It is recognized in this proposal that a long term proposal for maintaining and expanding career education is necessary. Turning the American educational system around cannot be limited to one five year effort to secure massive implementation.

Career Education and the Future
Raymond Wasdyke

The Wasdyke paper examines several concepts related to the future expansion of career education throughout the nation. Part I looks at career education as it relates to future trends in American education. Part II presents a suggested structure for the development of legislation compatable with future educational needs. Also considered are the various program and funding options.

The paper identifies five basic provisions for comprehensive career education legislation.

(1) leadership development

(2) program grants to states

(3) state planning and evaluation grants

(4) continued authorization of the National Advisory Council on Career Education

(5) an expanded Federal Office of Career Education

An Analysis of Federal Legislation Bearing on Career Education

Melvin L. Barlow

This commissioned paper was presented orally to the National Advisory Council on Career Education. Essentially the paper reviewed the various federal enactments having bearing on career education. The paper specifically focused on existing and proposed vocational education legislation.

The Implementation and Administration of a Federal Career Education Program

Terry W. Hartle

This commissioned paper was prepared for the National Advisory Council to call attention to alternatives and obstacles in the administration of a federal career education program. The paper reviews existing patterns of federal involvement in related programs and raises such questions as the role of state involvement and appropriate mechanisms for administration of future career education efforts.

An Analysis of State Laws on Career

Education and Pending State Legislation

David L. Jesser

As depicted in the Table (p.18a) state legislation relating to Career Education exists in fourteen of the states at the present time. As also depicted in the same Table, it has been indicated that legislation is either pending or in some stage of discussion in seven states. The number of states actually possessing legislation for Career Education represents 28% of the fifty states, or slightly more than one fourth. (When a total of 57 jurisdictions is used as a base, the percentage drops to 24, or slightly less than one-fourth.)

It has been suggested that the percentage figures used here might be taken as an indication of both lethargic movement and a lack of interest. Neither inference should be drawn. The growth in the number of states having Career Education is rather startling when a time frame of seven years is applied. And it does appear likely that several states which do not have legislation of this nature at present are seriously considering it. So, it should be fair to observe that the progress has been, and is, somewhat other than lethargic. There is and has been marked movement.

At the same time, it appears likely that there are likely to be several states that will opt for no state legislation for Career Education. The probably reasons have already been discussed elsewhere in this report, and need not be repeated. As was noted in a previous report about Career Education prepared by the author, however, the matter of state legislation for Career Education would seem to be just that, a matter for the states themselves to consider.

But while the number of states having legislation for Career Education has increased during the past several years, the number at present (14) makes it difficult, if not impossible, to detect many strong patterns or indications that might be described as trends. The one possible exception to this point can be found when examining definitions. Most of the definitions contained in the legislation are, generally speaking, quite similar. Most contain references to the several accepted components of Career Education, including Awareness, Orientation, Exploration, and Decision Making. And where definitions contained or implied purposes, there was a similar degree of likeness.

If the existing legislation can be taken as being representative of all states, there would probably be little difficulty in obtaining consensus as to definition and purpose. The same could not be said, however, when considering other facets of the legislation—funding, levels of education, populations served, etc. Each state has its own uniqueness and its peculiarities, and these characteristics appear to be reflected in those portions of the state legislation that provide for those specific aspects.

State Legislation - Pro and Con

As implied in several places throughout this report, there are arguments both for and against having state legislation for Career Education. Legislation can serve as the impetus to get a state "moving". And indeed it would seem to serve this purpose well in some states. On the other hand, the very existence of state legislation might serve to place undue constraints or restraints on the activities of a dynamic state department of education.

In some states specific legislation is needed to obtain the funds needed to support the concept of Career Education, while in others the necessary funds are obtained sans legislation, and one perceived "unnecessary" hurdle or impediment is removed. And so it goes, or could go, almost ad infinitum.

The pro or con of state legislation can only be provided by the individual state concerned. People knowledgeable about the state, its people, and its traditions, are really the only ones who can provide the proper arguments. But perhaps a general rule might be applied, and might be developed in response to questions such as: What is the purpose of state legislation for Career Education:

- Are the purposes of the legislation attainable without the specific legislation?
- Are the goals of Career Education attainable without the suggested legislation?

Answers to these and related questions may be possible to ascertain, and the answers may then provide guidelines for states to follow when considering legislation (or state board action) for support of Career Education.

Analysis and Synthesis of Existing Career Education Legislation

Joel S. Berke - Terry W. Hartle

This paper's basic intent was to identify for the National Advisory Council on Career Education the various types of legislation under which career education activities have been funded. Among the Legislative Authorizations:

(1) Vocational Education Act, 1963 amended 1968. Parts C,D,G,I

(2) Education Professions Development Act. Parts A,D,F

(3) Higher Education Act of 1965. Title III and IV

(4) Education of the Handicapped 1970. Parts B and F

(5) Elementary and Secondary Education Act 1965. Title 3

Also identified was the Comprehensive Employment and Training Act of 1973 and numerous other programs of Domestic Assistance.

In Addition the paper identifies legislation proposed by several interest groups and some obey elements of any widely acceptable legislation.

Additional Commissioned Papers

The following two reports were also commissioned by the Council. The summaries which follow are brief reviews.

REVIEW AND SYNTHESIS OF RESEARCH CONCERNING CAREER EDUCATION

Career education is not treated as an innovation among other innovations or as a development dictated by cost-benefit considerations.

The general thrust and focus of this research is the benefit it can bring to the career development of students and to the functioning of professional educators involved in that development. Table XII shows this pattern of significance. The perceptions of the researchers and this reviewer do not differ to any marked degree.

Clarifying and Refining Career Education Concepts

The problem of the definition of career education is not discussed anywhere in this body of research. The official suggestions or standardized conceptualizations from the U.S. Office of Education concerning career education have been widely used as normative. No reference or use is made of the priorities for career education announced by the National Institute of Education.

Repeatedly, when surveys of attitudes toward career education are made in this body of research, state and U.S. Office of Education conceptualizations are used intelligently as a matter of course, although without critical discussion.

These researchers are well informed as to the basic concepts of career education. Kerr (#26) concluded that his control group of teachers had the misconception that career education was only for a knowledge of jobs.

The theory of career or vocational maturity benefitted from this body of research. Crosby (#11) discovered that greater vocational maturity of selected 11th graders in Kentucky was related to higher mental maturity, higher verbal aptitude and success in trade and industrial education. English (#13) showed that some aspects of the vocational maturity of 150 Hartford, Connecticut,

high school students were improved through either the Connecticut View System and Time Share Corporation's Guidance Information System. Graves (#16) showed that increased career knowledge cannot be equated with increased vocational maturity.

Alienation has not been much discussed anywhere--within or outside of this body of research--in connection with career development. However, Crawford (#10) related levels of alienation to career objectives and educational plans in nine high schools. He showed that (1) students with career objectives had significantly higher self-acceptance and lower alienation levels than those without them; (2) vocational education students were less alienated from their families and schools than non-vocational students, but vocational students reflected the high alienation levels linked with low socio-economic status.

Some "career education talk" is perhaps excessive at the point of emphasizing something approaching absolute freedom of choice of career goals and educational progress. Realism is brought to this tendency by two studies related to occupational aspirations. M. Harris (#23) reported that attitudes toward various occupations in over one thousand Georgia students in grades three through twelve were correlated closely with socio-economic status. Powers (#36) reported that the occupational aspirations and expections of Kentucky ninth-graders were higher when students had high self-esteem, lived in smaller communities, were active in school affaris, and had family characteristics supportable of such aspiration.

Another study underlines the reality that not everyone will do well in technical education. Ingram (#24) discovered that successful technical students have definite and unique non-intellectual characteristics as compared with the group norm's characteristics.

Career Education is Widely Accepted and Supported

One study demonstrated patterns of parent acceptance of career education. Jarmer (#25) found that responding parents of children in a school district in Topeka, Kansas, were generally positively oriented to the concept of career education; he also found that female parents, parents with higher educational levels, and younger parents were more positive in their understanding than male parents, parents with lower educational levels and

older parents.

Elementary teachers are often open to career education. Rask (#37) found that 176 elementary teachers were more favorably impressed with career education as correlated with years of teaching experience, number of siblings, recency of part-time work experience outside education, and closeness of the location of in-service preparation activities. Reyes (#38) discovered that career education is supported more by teachers when they are from lower elementary grades, when they know much about career education, and when they are women.

Secondary school educators are favorably inclined to career education when well informed. Ohanneson (#34) discovered that among 900 California high school teachers, attitudes were most favorable toward career education when teachers were informed about career education, when teachers had non-teaching work experience, and when teachers were in vocational education or industrial arts. Ricciuti (#39) reported on the knowledge and attitude toward career education held by 240 Massachusetts high school teachers; a knowledge of career education was greater among academic teachers than vocational teachers; and the attitude toward career education was more positive among vocational teachers. Santoro (#41) reported that support for career education would be found mainly among vocational teachers, and teachers who were well informed.

Administrators are responsive under certain conditions. Barth (#3) found that 600 elementary and secondary Illinois school principles and superintendents, regardless of school size or grades involved, reported generally favorable attitudes toward career education. Administrators from smaller schools and districts differed from those from larger systems in who should participate in career education and which teachers should be involved. Leddy (#28) showed that Guam buiness mangers and public school teachers agreed in their overall attitude toward the work concepts of career education and shared a strong desire to see the work concept implemented in the school system.

Implementation studies favor "infusion" and careful planning. Mecagni (#31) found that academic teachers in Colorado junior high schools believed their subjects can help achieve the eight goals of career education and favored infusion as a curriculum adjustmant rather than a separate unit or separate class approach. Burris

(#5) found that counselors in selected Colorado union high schools preferred a "moderate infusion" of career education as more achieveable than did the administrators. With all of Burris' educators, goals concerning self-awareness and career awareness seemed more achievable than the other goals suggested. Bregman (#4) reported that similar patterns of implementation of career education in both rural and urban California schools; two clusters of changes in administration occurred: (1) beginning the innovation, (2) maintaining the innovation. Bregman reported the need for full-time staff for career education and eight operational provisions, such as program evaluation and curriculum improvement.

Evaluations Steer Implementation

A survey of the dissertations revealed that there were twenty-two which evaluated the effectiveness of career education programs. Of these, nineteen were summative and three were formative.

A major target for evaluation was student attitudes and career progress. Baker (#2) found that early career patterns (the first four years of employment) of selected Oklahoma high school graduates were largely similar, despite the vocational or technical training received. Those with vocational training tended to have more full-time employment, meet their military obligations sooner and enroll in trade or technical school more readily than those without vocational training. Grim (#20) demonstrated that 65 educable mentally retarded senior high students in Springfield, Missouri, in general, vocational or work study programs do not differ in immediate job adjustment on the basis of their programs; also, graduation or dropping out is not correlated with I.Q. Looney (#29) showed that it was intelligence level and not a specific work orientation curriculum in an Arkansas high school which most affected female students in their informed attitudes about women in the world of work. McCay (#30) showed that workers with intrinsic work orientation have higher job satisfaction and productivity than those with more optimistic orientations; and also that senior vocational educational students showed a less degree of positive work orientation than did workers. Schoenike (#42) found that Wisconsin vocational students and employed vocational graduates view job training as important, but the specific

occupational skills as more valuable than work orientation.

A significant effort was made to evaluate the benefits of short term or "intervention" career programs. Carlson (#7) found that an intervention process using achievement motivation simulations can affect vocational decision making for Washington, D.C. inner-city high school students. However, Charles (#8) concluded that short-term projects in Colorado career development programs for eighth graders produced minimal noticeable results since career development is a life-long process; recommended long-term research in career education to determine the effect of its programs. Poulin (#35) discovered that in a 15 year career orientation program for Maine ninth graders, vocational interests and plans were not strengthened; the study was judged inconclusive. Rinas (#40) concluded that the results of a one year program of career exploration for ninth grade boys were inconclusive in either defending or rejecting short-term career education.

The results of in-service teacher training were studied. Kerr (#26) found that a significant increase in the career maturity of students in sixth, seventh, and eighth grade classes in four Kansas school districts occurred because those teachers experienced in-service classes which included presentations of the rationale and implementation procedures for career education. O'Bannon (#33) found that elementary teachers involved in a constructional activity oriented in-service career education program develop a greater level of career knowledge and a more positive attitude toward career education. However, Vallejo (#49) reported that there was no positive relationship between fourth, fifth and sixth grade career education teachers in-service preparation and the career awareness of upper elementary pupils in any of the three grades studied.

One study of pre-service teacher training for career education was included. Garber (#15) discovered that two modes of instruction of elementary teacher education majors in career education were equally effective: group instruction and individual instruction.

Successful career education teachers have special characteristics. Mendelson (#32) reported that the teachers who made more of an impact on student career choice and achievement frequently adopted innovative

methods including job simulation and their own work experiences. Gustafson (#21) concluded that vocational schools have unique social climates, and that related vocational skills teachers were more open than academic teachers.

Competencies for career education counselors were studied in two dissertations. Clark (#9) identified key counselor competencies for career education by committees of educators and business industry persons; key competencies were (1) showing career and education information; (2) planning and implementing career-related programs. Schreiner (#43) found that 194 vocation counselors and regular counselors were in general agreement on the role of the vocational counselor.

Two studies were found concerning the career education of the disadvantaged. Cantor (#6) reported that critiqued videotape feedback used with simulation games are highly effective in the career education of Washington, D.C., inner-city high school students. Harris (#22) reported that despite numerous social and economic handicaps, rural, low income adults in Vermont remain committed to work as a means of gaining many extrinsic and intrinsic satisfactions.

An integrated curriculum for career education was the target of one dissertation. LaMay (#27) concluded that combining linear measurement and carpentry was no more effective in teaching arithmetic and career information than in teaching them separately for fourth graders in Omaha, Nebraska; however, girls retained carpentry information better when it was integrated with linear measurement.

Instruments to measure the effectiveness of career education are a basic need. Greene (#18) showed that California secondary school classes taught in special career education programs effectively increased the maturity of students' career attitudes equally in all six grades and for both sexes alike; until standardized testing devices become available, he recommended that school districts design their own instruments to measure career education concepts.

School size is not a major difficulty in terms of career education materials, according to one study. Barth (#3) reported that career education program description materials are useful without regard for school

size.

Costs related to career education was a topic barely touched by this body of research. Ahern (#1) found that the cost of selected career information for sixth graders exploring career information in rural Tennessee schools is less expensive to initiate in paper form than microfilm but more expensive to replace and maintain. The sixth graders recalled career information better from microfilm than from paper presentations.

By far the most unique study was that of Tucker (#48) in which he recorded in various ways the socio-political pattern of Congress in passing career education legislation. By necessity this was a descriptive rather than an evaluative study. It has a futuristic quality which is appropriate to end this report on the significance of this body of research.

THE SIGNIFICANCE OF THE RESEARCH COVERING CAREER EDUCATION IN 49 DISSERTATIONS AUTHORED BY EPDA DOCTORAL FELLOWS 1972-1975

BROAD THEMES	VIEWPOINT OF RESEARCHER		VIEWPOINT OF REVIEWER	
	MAJOR EMPHASIS	MINOR EMPHASIS	MAJOR EMPHASIS	MINOR EMPHASIS
Benefitting professional educators in their tasks	26	1	27	1
Benefitting the career development of students	24	0	27	2
Treatment of the basic theory of career education	4	0	0	1
New area of research	3	0	0	1
Practicality of research	1	0	3	11
Cost-benefit analysis	1	0	1	0

THE EMERGING HISTORY OF CAREER EDUCATION

Summary

Administrative Structure for Career Education -- The U.S.O.E. N.I.E. -- A Comparison with OE of Career Education Efforts and Structure

Funding for Career Education

- Funding for Career Education -- The U.S.O.E.
- N.I.E. Fiscal Support of Career Education
- State Support of Career Education

Federal Conceptualization Efforts in Career Education

The Nature of Federal Activities in Career Education

- Demonstration Projects
- Curriculum Projects
- Conferences and Studies
- Technical Assistance to State Education Agencies and Local Education Agencies in Implementing Career Education
- Concept Paper on Career Education Prepared
- Bibliographies on Career Education
- Career Education Communication System
- Evaluation of Career Education
- Clarifying Career Education to Various Publics
- Coordination of OE Career Education Activities
- Mini-Conferences
- Collaboration Among Federal Agencies Pertinent to Career Education
- Identification and Interpretation of Legislative Needs in Support of Career Education
- Basic Research Pertinent to Career Education
- Career Education Models Development
- Regional Laboratories and Research and Development Centers
- Validated Instructional Materials
- Invitational Workshops
- Abstracts of Exemplary Projects in Vocational Education
- Clearinghouse for Career Education Materials
- Occupational Information Systems
- Identifying Exemplary Career Education Sites
- Films
- Projected OE Activities for Career Education in FY 1975 and Beyond
- 1976

National Models of Career Education
A Current View of the Models

Occupational Clusters

Legislative History of Career Education
Early Precursors of Career Education Legislation (1960-1970)

Major National Conferences Influencing Career Education
First National Conference on New Directors-New Programs-New Professions
The American Vocational Association Convention
The Coordinating Conference of State-Level and Local Level Directors of Career Education Projects Funded Under Section 142(c) of Part D and Section 131 (a) of Part C of Public Law 90-576
Commissioner's Regional Conferences on Career Education
National Conference on Career Education for Deans of Colleges of Education
National Conferences on Career Education for Professors of Educational Administration
Community Dialog in Career Education
Sixth Annual National Vocational and Technical Teacher Education Seminar
U.S. Office of Education
National Invitational Conference on Post-Secondary Career Education for State Directors of Vocational Education, Community/Junior Colleges, Adult and Continuing Education
Career Education: Implications for Minorities
First National Conference on Career Education
Second National Conference on Career Education
Council of Chief State School Officers National Conference for State Directors/Coordinators of Career Education
The Wingspread Conference on Career Education
U.S.O.E. Mini-Conferences
Greeg National Career Education Conference
The Center for Vocational-Education
The Center for Occupational Education

National Organizations, Agencies and Associations which have Endorsed Career Education Since 1971
American Association of Community and Junior Colleges
American Association of School Administrators
American Association of State Colleges and Universities
American Personnel and Guidance Association
American Vocational Association
Association of Independent Colleges and Schools
Boy Scouts of America
Chamber of Commerce of the United States
The Chamber of Commerce Concept of Career Education

The Council of Chief State School Officers
National Advisory Council on Adult Education
The National Advisory Council on Vocational Education
The National Assessment of Educational Progress
National Association of Independent Schools
National Association of Manufactures
National Association of Secondary School Principals
National Association of State Directors of Vocational Education
The National Commission on the Reform of Secondary Education
National Community School Education Association
The National Education Association
National Manpower Institute
National Retail Merchants Association
National Society for the Study of Education
National Urban Coalition
Phi Delta Kappa

Professional Dissent in Career Education
The Council for Basic Education

Bibliography -- Books and Monographs Pertinent to Career Education Since 1971

Public Opinion About Career Education as Reflected in Newspapers

Criticisms of Career Education

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